

Field notes on corvids in Ethiopia

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Ethiopia is very interesting for corvids because there are two endemic species (the Ethiopian Bush-Crow *Zavattariornis stresemauni* and the Thick-billed Raven *Corvus crassirostris*) and two isolated populations of a Palearctic species, the Red-billed Chough *Pyrhacorax pyrrhacorax*. This country is also inhabited by two species (the Black Crow *Corvus capensis* and the Fan-tailed Raven *C. rhipidurus*) which extend their ranges mainly southwards and northwards respectively. Last but not least, hybridization seems to occur here between a Paleotropical crow (the Pied Crow *Corvus albus*) and a form (the Dwarf Raven *Corvus edithae*) which is usually treated as a close relative of the Brown-necked Raven *Corvus ruficollis*, which, in turn, might be a subspecies of the Northern Raven *Corvus corax*, a Holarctic species. The literature on the corvids of Ethiopia is sparse, and their behaviour has hardly been studied. Here, I report a few morphological and behavioural observations on two species, which I made during a tour south of Addis Ababa, 8–21 August 1994. Field notes on a third species, with supporting photographs, are included in a commemorative publication (Londei, in press).

THICK-BILLED RAVEN *Corvus crassirostris*

The adaptive value of its extremely massive bill is unclear. Goodwin (1976) supposed that it has evolved for predation or as a display organ; the following observation supports the latter hypothesis. At Lake Chamo, I saw five Thick-billed Ravens resting on trees together with a larger number of Hooded Vultures *Necrosyrtes monachus*, around a place where fishermen habitually skin large fish and cut them to pieces. As soon as some scraps of fish became available to the birds, the ravens began displacing the vultures one by one and continued until the latter all left the area. I counted about ten threatening approaches in 20 minutes, with the silent raven stretching its neck alternately to either side with deliberate movements, while slowly moving from branch to branch towards its target, with the bill open and throat distended. Such an approach was mostly enough to cause the vulture to fly away, although two individuals that were slow to leave were finally pecked at. With reference to competition between the Thick-billed Raven and vultures, I have only found a sentence in a rather ancient report (Hilgert, in Kleinschmidt 1906) suggesting that even such large vultures as the Lapped-faced *Torgos tracheliotos* or the White-headed *Trigonoceps occipitalis* may fear this raven.

The real power of the Thick-billed Raven's bill as a weapon during interspecific encounters is still to be ascertained, but the 'vulturine' characteristic of having very short (for a corvid) feathering on the head strongly suggests that this species has evolved to feed on meat inside large carcasses. Thus the Thick-billed Raven may have a long history



Figure 1. A so-called Dwarf Raven.

of competition with vultures. Furthermore, I noticed on the above occasion that a raven held a scrap of fish under both feet while tearing at it. Corvids may use both feet (instead of the usual one) for holding large food items, but this item was small and fleshy, suggesting that the tearing technique may be stereotyped, adapted to more difficult tasks. Being strongly arched, the massive bill is also likely to contribute effectively to powerful tearing in this species.

The white patch on the Thick-billed Raven's nape is very bright in the shadow, being often, to the human eye, the only sign of the presence of a bird resting under a tree canopy when the sun is at its highest. I suggest that it may have evolved to allow conspecifics, or interacting species, to detect the bird's presence and appreciate its posture more easily. The almost white tip of the bill may have a similar function at a shorter distance.

DWARF RAVEN *Corvus (ruficollis) edithae*

I observed this form for the first time at El Sod (4°12'N, 38°23'E), which is far from the range of *C. albus*. Nevertheless, I was reminded of the latter more than of ravens as far as general shape was concerned (Fig. 1). In particular, the wings appeared to me crow-like and stumpy compared to ravens' wings, all the more as the presumed closest relative, *C. ruficollis*, has even more slender wings than *C. corax* (Madge & Burn 1994). At a garbage dump, a bird erected the head, bill upward, in front of a conspecific. This display lasted about 2 seconds and only induced the other bird to turn its head away and retreat, but it seemed very significant to me because a chin-up threat display has been reported for *C. albus* (Benson & Penny 1970, in Goodwin 1976). At

Robe (7°08'N, 40°00'E), which is in the known zone of the presumed *albus* × *edithae* hybridization, I saw an all-dark individual, perched on a pole, calling with up-raised bill. I could not hear its voice clearly, but the accompanying movements were very similar to those described by Goodwin (1976) for *C. albus*. This pattern would be unusual for a raven.

These observations support the opinion that *C. edithae* is closely related to *C. albus* (Blair 1961, North 1962), perhaps analogously to the relationship of *Corvus corone corone* to *Corvus (corone) coruix*. If so, *C. edithae* could not be a subspecies of *C. ruficollis*, as in both morphology and behaviour the latter appears to be related to *C. corax* (Goodwin 1976). Instead of Dwarf Raven, the less usual name Somali Crow would be more appropriate. *Corvus edithae* and *C. albus* seem to differ considerably from each other in ecology (Wilson 1990) but this may simply reflect the degree of their geographical separation within Ethiopia.

Concerning the presumed hybrids, I saw intermediate birds also outside the areas mapped by Blair (1961), namely at Dodola (6°58'N, 39°11'E), Bekoji (7°32'N, 39°15'E), Asela (7°57'N, 39°08'E) and Nazret (8°33'N, 39°16'E). These records, together with others published meanwhile (Alamargot 1987, Wilson 1990), extend the overall range of presumed hybridization and make the distribution of this phenomenon less patchy.

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